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(54) Title: AMINO ACID SEQUENCES FACILITATING PENETRATION OF A SUBSTANCE OF INTEREST INTO CELLS AND/OR CELL NUCLEI

(57) Abstract: The present invention relates to an amino acid sequence being able to facilitate penetration of a substance of interest inside cells and/or cell nuclei and having the following formula (I)  $[(X_1)_p [(X)_o (B)_n X B X X B]_m (X_2)_q$  Wherein  $X_1$  and  $X_2$  are amino acid sequences of 1 to 20 amino acids;  $p$  and  $q$  are whole numbers between 0 and 5;  $B$  is a basic amino acid;  $X$  is a non-basic, preferably hydrophobic amino acid, such as alanine, isoleucine, leucine, methionine, phenylalanine, tryptophan, valine or tyrosine;  $n$  is 2 or 3;  $m$  is 1 to 4;  $o$  is 0 or 1.  $B$  is a basic amino acid;  $X$  is a non-basic, preferably hydrophobic amino acid, such as alanine, isoleucine, leucine, methionine phenylalanine, tryptophan, valine or tyrosine;  $n$  is 2 or 3;  $m$  is 1 to 4;  $o$  is 0 or 1.